IN THE CLAIMS

1-13 canceled

14. (new) An optoelectronic process for the inspection of an area of revolution (T) of a receptacle (3) presenting an axis of revolution (X), where the process includes the following steps:

- illumination of the surface to be inspected (T) using a lighting system (5) presenting a lighting surface (S) with an axis of revolution (A) located in the extension of the axis of revolution (X) of the receptacle, and that includes at least three given radiation spectra separated from each other,

- formation of an image (I) of the surface to be inspected using a camera (7), for each angular sector (T_1, T_2, T_3) of the surface to be inspected by selecting only the light rays returned by the surface to be inspected and presenting one of the said given radiation spectra, so as to eliminate the parasitic light rays whose radiation spectrum does not correspond to that selected for the said angular sector,

- and analysis of the image formed with check the characteristics of the surface to be inspected,

characterized in that it consists of:

- illuminating the surface to be inspected (T) using the lighting system (5) whose the lighting surface (s) of revolution is divided over at least three angular sectors (S_1, S_2, S_3), each emitting a given radiation spectrum, so that at each point of the angular sectors (S_1, S_2, S_3) the radiation spectrum emitted is separate from the radiation spectrum emitted in the vicinity of a symmetrical point taken in relation to the axis of revolution (A).

15. (new) A process according to claim 14, characterized in that it consists of forming an image for each angular sectors (T_1, T_2, T_3) of the surface to be inspected (T), by selecting only the light rays returned by the surface and coming from an angular sector (S_1, S_2, S_3) of the lighting system located on the same side as the said angular sector of the surface to be inspected in relation to the axis of revolution (X).

16. (new) A process according to claim 14, characterized in that it consists of illuminating the surface to be inspected (T) in angular sectors of equal value.

17. (new) A process according to claim 14, characterized in that it consists of illuminating by means of radiation spectra that are each of a given color.

18. (new) A process according to claim 14, characterized in that it consists of analyzing the image formed in order to determine the flashing or surface faults of the finish of a receptacle.

19. (new) An optoelectronic device for inspection of a surface of revolution (T) of a receptacle (3) presenting an axis of revolution (X), where the device includes:

- a lighting system (5) presenting a lighting surface (S) with an axis of revolution (A) located in the extension of the axis of revolution (X) of the receptacle, and that includes at least three given radiation spectra separated from each other,
- and a system (6) to form an image (I) of the surface to be inspected, that

includes a camera (7) and means (9) for analysis of the image with a view to checking the characteristics of the surface to be inspected, where the image formation system (6) forms an image for each angular sector (T_1, T_2, T_3) of the surface to be inspected by selecting only the light rays returned by the surface and presenting one of the said given radiation spectra, so as to eliminate the parasitic light rays whose radiation spectrum does not correspond to that selected for the said angular sector,

characterized in that:

- the lighting system (5) has a lighting surface of revolution (S) divided into at least three angular sectors (S_1, S_2, S_3), each emitting a given radiation spectrum, so that at each point of the angular sectors (S_1, S_2, S_3) the radiation spectrum emitted is separate from the radiation spectrum emitted in the vicinity of a symmetrical point taken in relation to the axis of revolution (A).

20. (new) A device according to claim 19, characterized in that the image formation system (6) forms an image for each angular sector sectors (T_1, T_2, T_3) of the surface to be inspected by selecting only the light rays returned by the surface and coming from an angular sector (S_1, S_2, S_3) of the lighting system located on the same side as the said angular sector of the surface to be inspected in relation to the axis of revolution (X).

21. (new) A device according to claim 19, characterized in that the lighting system (5) includes an annular source (13) that presents all of the given radiation spectra, and a series of at least three filters (14_1, 14_2, 14_3) located between the annular

source (13) and the surface to be inspected (T), each lying on an angular sector (S_1, S_2, S_3), and each filter presenting a given transmission spectrum separated from that of the other filters.

22. (new) A device according to claim 20, characterized in that the lighting system (5) includes a series of elementary light sources (10) divided over at least three angular sectors (S_1, S_2, S_3) and emitting a light spectrum that is different for each angular sector.

23. (new) A device according to claim 19, characterized in that the image formation system (6) includes a series of at least three filters (15_1, 15_2, 15_3) interposed between the camera (7) and the surface to be inspected (T), each lying on an angular sector (U_1, U_2, U_3), each filter presenting a given transmission spectrum separated from that of the other filters.

24. (new) A device according to claim 19, characterized in that the image formation system (6) includes means for processing the signals delivered by a color camera (7) so as to obtain, for each angular sector of the surface to be inspected (T_1, T_2, T_3), a signal that is representative of a given radiation spectrum.